The Chew Bahir sediment record: wet-dry fluctuations and their possible influence on Homo sapiens mobility during the last 200 ka. African Quaternary Association Meeting, Nairobi, Kenya, 14-22 July 2018

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The 280 m long Chew Bahir composite sediment record covers the last 550 ka of eastern African climate history. The core was collected in December 2014 in southern Ethiopia as part of the ICDP-HSPDP (Hominin Sites and Paleolakes Drilling Project) and CRC-806 project (Collaborative Research Centre) “Our way to Europe”. Both projects aim at better understanding human-climate interactions, including the potential impact of environmental influences on hominin evolution and mobility. Here we present some results of the high-resolution Chew Bahir geochemical and sedimentological data sets for the last 200 ka. These comprise grain-size analysis, MSCL, XRF geochemistry and stable isotope data. Correlations of data with Indian Ocean SSTs (e.g. Bard et al. 1997), the Soreq cave speleothem 18O record (Bar-Matthews et al. 2003) as well as the North African wet-dry index (Grant et al. 2017), suggest that wet-dry climate fluctuations in Chew Bahir might have been driven by changing monsoonal activity. Moreover, several long-term wet-dry oscillations reveal variations mostly in the precession (~15-25 kyr), but also eccentricity frequency bands (~90-120 kyr). Based on these results we will be able to test and discuss climate related hypotheses on human evolution and dispersal.